AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method for locating signal path-rays in a communications system, comprising the steps of:

receiving a signal;

decimating said signal to produce a decimated signal;

processing said decimated signal to produce at least one first location having a first precision ; and

processing said signal and a generated code using said at least one first location having said first precision to produce at least one second location having a second precision, said first precision being less precise than said second precision.

2. (Canceled)

3. (Original) The method according to Claim 1, further comprising the step of:

sampling said signal in an analog-to-digital conversion a plurality of times per chip prior to said step of decimating; and

wherein said signal in said step of decimating comprises the sampled signal.

4. (Original) The method according to Claim 1, wherein said communications system comprises a wireless Code Division Multiple Access (CDMA) communications system.

5. (Original) The method according to Claim 1, wherein said step of processing said decimated signal to produce at least one first location comprises the step of applying said decimated signal to at least one filter to produce said at least one first location.

6. (Original) The method according to Claim 5, wherein said step of applying said decimated signal to at least one filter to produce said at least one first location comprises the step of applying said decimated signal to at least one finite impulse response (FIR) filter of at least one matched filter.

7. (Original) The method according to Claim 5, wherein said step of processing said decimated signal to produce at least one first location further comprises the step of applying an output of said at least one filter to a peak detector to determine said at least one first location.

8. (Original) The method according to Claim 1, wherein said step of processing said signal and a generated code using said at least one first location to produce at least one second location comprises the step of shifting one of said signal and said generated code responsive to said at least one first location to create a shifted variable and a non-shifted variable.

9. (Original) The method according to Claim 8, wherein said step of processing said signal and a generated code using said at least one first location to produce at least one second location further comprises the step of correlating said shifted variable with said non-shifted variable to produce a plurality of correlation values.

10. (Original) The method according to Claim 9, wherein said step of processing said signal and a generated code using said at least one first location to produce at least one second

location further comprises the step of comparing said plurality of correlation values to select said at least one second location.

11. (Original) The method according to Claim 9, wherein said shifted variable comprises said signal and said non-shifted variable comprises said generated code.

12. (Original) The method according to Claim 9, wherein said shifted variable comprises said generated code and said non-shifted variable comprises said signal.

13. (Original) The method according to Claim 1, further comprising the step of forwarding said at least one second location to rake fingers to enable subsequent maximal ratio combining (MRC) of said signal.

14. (Previously Presented) A receiver system for locating signal path-rays in a communications system, comprising:

a decimation part that decimates a signal in accordance with a decimation factor;

at least one filter connected to said decimation part, said at least one filter involved in determining a first location of said signal;

a code generator part, said code generator part adapted to generate at least one code pattern, wherein a version of said at least one code pattern is an un-shifted version of said at least one code pattern;

at least one shifter connected to said at least one filter to receive said first location, said at least one shifter for shifting said signal to produce a shifted version of said signal; and

at least one correlator, said at least one correlator correlating a the shifted version of said signal to the un-shifted version of said at least one code pattern.

15-16. (Canceled)

17. (Previously Presented) The receiver system according to Claim 14, further comprising an analog-to-digital converter, said analog-to-digital converter converting said signal to a digital sampled signal prior to said decimation part decimating said signal.

18. (Original) The receiver system according to Claim 17, wherein a sampling rate of said analog-to-digital converter is such that an analog version of said signal is sampled a plurality of times per chip.

19. (Original) The receiver system according to Claim 18, wherein said sampling rate and said decimation factor are determinative, at least in part, of a precision of said first location.

20. (Original) The receiver system according to Claim 14, further comprising a peak detector; and

wherein said at least one filter comprises a plurality of matched filters, said plurality of matched filters include at least one finite impulse response (FIR) filter, an input of said peak detector is comprised of an output of said at least one FIR filter, and said first location is comprised of an output of said peak detector.

21. (Original) The receiver system according to Claim 14, wherein said at least one correlator comprises a plurality of correlators, each of said plurality of correlators including a multiplying mixer and an integrator.

22. (Previously Presented) The receiver system according to Claim 14, further comprising a comparison part; and

wherein said at least one correlator comprises a plurality of correlators, each of said plurality of correlators outputs a correlation value, said comparison part selects the highest value from among the output correlation values, and a second location output from said comparison part is comprised of said highest value or a related value.

23. (Original) The receiver system according to Claim 22, wherein a first precision of said first location is less exact than a second precision of said second location.

24. (Original) The receiver system according to Claim 14, wherein said communications system comprises a wireless Code Division Multiple Access (CDMA) communications system.

25. (Original) The receiver system according to Claim 14, further comprising a comparison part and a plurality of rake fingers, said comparison part receiving at least one output from said at least one correlator and providing a second location to at least one of said plurality of rake fingers.

26. (Canceled)

27. (Previously Presented) The method according to Claim 1, wherein said signal in said step of decimating comprises an oversampled signal.

28. (Previously Presented) The method according to Claim 1, wherein said step of processing said signal comprises the steps of:

generating a code;

shifting based on said first location;

correlating said generated code to said signal, at least one of said generated code and said signal having been shifted in said step of shifting; and

selecting said second location in response to said step of correlating.

29. (New) A receiver system for locating signal path-rays in a communications system, comprising:

a decimation part that decimates a signal in accordance with a decimation factor;

at least one filter connected to said decimation part, said at least one filter involved in determining a first location of said signal;

a code generator part, said code generator part adapted to generate at least one code pattern;

at least one shifter connected to said at least one filter to receive said first location, and at least one of said signal and said at least one code pattern, said at least one shifter performing at least one of:

shifting said signal to produce a shifted version of said signal based on said first location; and

shifting said at least one code pattern to produce a shifted version of said at least one code pattern based on said first location;

at least one correlator, said at least one correlator performing at least one of:

correlating said shifted version of said signal to an un-shifted version of said at least one code pattern to produce a second location; and

correlating an un-shifted version of said signal to said shifted version of said at least one code pattern to produce said second location.

30. (New) A receiver system for locating signal path-rays in a communications system, comprising:

a decimation part that decimates a signal in accordance with a decimation factor;

at least one filter connected to said decimation part, said at least one filter involved in determining a first location of said signal;

a code generator part, said code generator part adapted to generate at least one code pattern;

at least one shifter connected to said at least one filter to receive said first location and said at least one code pattern, said at least one shifter for shifting said at least one code pattern to produce a shifted version of said at least one code pattern based on said first location; and

at least one correlator, said at least one correlator correlating an un-shifted version of said signal to the shifted version of said at least one code pattern.

31. (New) The receiver system according to Claim 30, further comprising an analog-to-digital converter, said analog-to-digital converter converting said signal to a digital sampled signal prior to said decimation part decimating said signal.

32. (New) The receiver system according to Claim 31, wherein a sampling rate of said analog-to-digital converter is such that an analog version of said signal is sampled a plurality of times per chip.

33. (New) The receiver system according to Claim 32, wherein said sampling rate and said decimation factor are determinative, at least in part, of a precision of said first location.

34. (New) The receiver system according to Claim 30, further comprising a peak detector; and

wherein said at least one filter comprises a plurality of matched filters, said plurality of matched filters include at least one finite impulse response (FIR) filter, an input of said peak detector is comprised of an output of said at least one FIR filter, and said first location is comprised of an output of said peak detector.

35. (New) The receiver system according to Claim 30, wherein said at least one correlator comprises a plurality of correlators, each of said plurality of correlators including a multiplying mixer and an integrator.

36. (New) The receiver system according to Claim 30, further comprising a comparison part; and

wherein said at least one correlator comprises a plurality of correlators, each of said plurality of correlators outputs a correlation value, said comparison part selects the highest value

from among the output correlation values, and a second location output from said comparison part is comprised of said highest value or a related value.

37. (New) The receiver system according to Claim 36, wherein a first precision of said first location is less exact than a second precision of said second location.

38. (New) The receiver system according to Claim 30, wherein said communications system comprises a wireless Code Division Multiple Access (CDMA) communications system.

39. (New) The receiver system according to Claim 30, further comprising a comparison part and a plurality of rake fingers, said comparison part receiving at least one output from said at least one correlator and providing a second location to at least one of said plurality of rake fingers.